

WHAT IS CLAIMED IS:

1. A heating apparatus in a color test machine, comprising:
 - a rotary tumbler seat;
 - a rotating shaft, turning the rotary tumbler;
 - 5 a heater, heating the rotary tumbler seat; and
 - a plurality of tumbler recesses, being provided in the rotary tumbler; characterized in that a plurality of solid micro particles are used to constitute a plurality of heat transfer media for heating and preserving the heat.
- 10 2. The heating apparatus in a color test machine according to claim 1, wherein the solid micro particles are natural sands.
3. The heating apparatus in a color test machine according to claim 1, wherein the solid micro particles are selected from one of aluminum oxide powder, magnesium oxide powder, or the ceramic powder, or a mixture at least two of aluminum oxide powder, magnesium oxide powder, and the ceramic powder.
- 15 4. The heating apparatus in a color test machine according to claim 1, wherein the solid micro particles is received in a recess clearance between the respective tumbler and the rotary tumbler seat.
5. The heating apparatus in a color test machine according to claim 1, wherein 20 an amount of the solid micro particles received in the recess clearance occupies a half of the recess clearance or less than a half of the recess clearance.
6. A heating apparatus in a color test machine comprising:
 - a rotary tumbler seat;
 - 25 a rotating shaft, turning the rotary tumbler;
 - a heater, heating the rotary tumbler seat; and
 - a plurality of tumbler recesses, being provided in the rotary tumbler;

characterized in that a temperature reduction device is added and the temperature reduction device further comprises a water inlet pipe with a nozzle head at an outlet end thereof, a water discharge hole being located at a bottom of the test machine;

5 whereby, the nozzle head can spray out the water to reduce the temperature of rotary tumbler seat so that a time duration before the respective test tumbler being taken out can be shortened after the process of dying.

10 7. The heating apparatus in a color test machine according to claim 6, wherein the temperature reduction device can be added with an automatic switch so that a programmable control of water spraying can be performed.

8. The heating apparatus in a color test machine according to claim 6, wherein the water inlet pipe can provide an inlet valve for a control of admitting the water from a water source.

15 9. The heating apparatus in a color test machine according to claim 6, wherein a filter can be added to remove any foreign substance.

10. A heating apparatus in a color test machine, comprising:

a rotary tumbler seat;

a rotating shaft, turning the rotary tumbler;

a heater, heating the rotary tumbler seat; and

a plurality of tumbler recesses, being provided in the rotary tumbler;

characterized in that a temperature measure device is added and the temperature measure device further comprises

25 a feeler rod, being disposed in and fixedly attached to the rotary tumbler seat, having two polar lines extending to the rotating shaft;

a drive part, being disposed at an end of the rotating shaft, providing an active polar cylinder and an active polar shaft with being connected to the polar lines respectively, the active polar cylinder being insulated from the

active polar shaft, the active polar cylinder and the active polar shaft being insulated from the rotating shaft respectively; and

a follower part, being disposed opposite to the drive part and being fixedly attached corresponding to the drive part, providing a passive polar shaft and a passive polar cylinder, the passive polar shaft being insulated from the passive polar cylinder, the passive polar shaft and the passive polar cylinder being insulated from the rotating shaft respectively, and the polar lines being extended outward via the passive shaft and the passive cylinder respectively to allow the feeler rod in a state of closed circuit.

- 10 11. The heating apparatus in a color test machine according to claim 10, wherein a spring may be provided to urge the follower part against the drive part so that the follower part keeps contact with the drive part.
12. The heating apparatus in a color test machine according to claim 10, wherein the active polar shaft at an front end thereof provides a sharp projection and the passive polar shaft provides a recess corresponding to the sharp projection.
13. The heating apparatus in a color test machine according to claim 10, wherein the active polar cylinder at an front end thereof provides a tilt polar recess and the passive polar cylinder at an front end thereof provides a polar slant corresponding to the tilt polar recess.

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